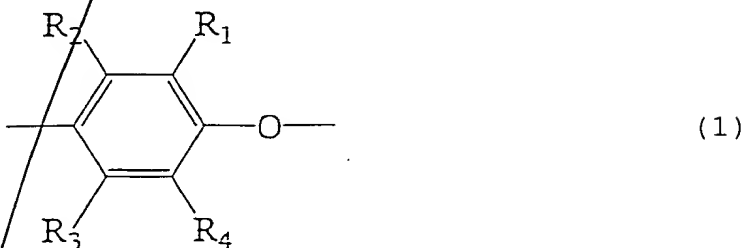


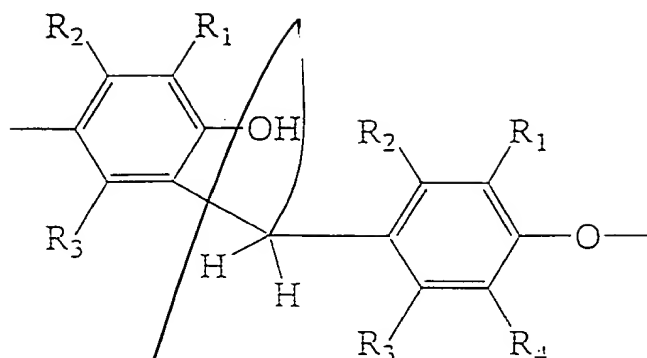
## CLAIMS

1. A modified polyphenylene ether resin which is a reaction product of 100 parts by weight of (A) a polyphenylene ether having a main chain structure of the following formula (1):



(wherein  $R_1$  and  $R_4$  each independently represents hydrogen, a primary or secondary lower alkyl, a phenyl, an aminoalkyl or a hydrocarboxy, and  $R_2$  and  $R_3$  each independently represents hydrogen, a primary or secondary lower alkyl or a phenyl), and 0.01 to 10.0 parts by weight of (B) a modifier selected from conjugated non-aromatic diene compounds, dienophilic compounds having one dienophile group and precursors of the diene or dienophilic compounds, wherein the number of rearrangement structures each represented by the following formula (2):

SUB  
C17



(2)

(wherein  $R_1$ ,  $R_2$ ,  $R_3$  and  $R_4$  have the same meanings as defined above in the formula (1)) is less than 0.01 per 100 phenylene ether units of the formula (1).

2. The modified polyphenylene ether resin according to claim 1, wherein the number of the rearrangement structures represented by the formula (2) is less than 0.005 per 100 phenylene ether units of the formula (1).

3. The modified polyphenylene ether resin according to claim 1, which has a melting point of 240 to 260°C and is in the form of powder having an average particle size of 3.0  $\mu\text{m}$  to 1.0 mm.

4. The modified polyphenylene ether resin according to claim 2, which has a melting point of 240 to 260°C and is in the form of powder having an average particle size of 3.0  $\mu\text{m}$  to 1.0 mm.

SUB  
B17

5. The modified polyphenylene ether resin according to claim 1, wherein the modifier (B) is maleic anhydride, maleic acid, fumaric acid, phenyl maleimide, itaconic acid, malic acid, glycidyl acrylate or glycidyl methacrylate.

SUB  
B1

6. The modified polyphenylene ether resin according to claim 1, which is obtained by reacting 0.2 to 3.0 parts by weight of the modifier (B) with 100 parts by weight of the polyphenylene ether (A).

7. A process for preparing a modified polyphenylene ether resin, which comprises:

reacting a mixture of 100 parts by weight of (A) a polyphenylene ether having a main chain structure of the formula (1) and 0.01 to 10 parts by weight of (B) a modifier selected from conjugated non-aromatic diene compounds, dienophilic compounds having one dienophile group and precursors of the diene or dienophilic compounds at a temperature not lower than a room temperature and not higher than the melting point of (A).

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A2

8. The process for preparing a modified polyphenylene ether resin according to claim 7, wherein

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B1

the polyphenylene ether (A) is in the form of powder obtained by precipitation from a solution and has a melting point of 240 to 260°C.

SUB  
B17  
9. The process for preparing a modified polyphenylene ether resin according to claim 7, wherein the reaction temperature is within a range of 100 to 230°C.

10. The process for preparing a modified polyphenylene ether resin according to claim 7, wherein the reaction temperature is within a range of 150 to 200°C.

WD  
11. The process for preparing a modified polyphenylene ether resin according to claim 7, wherein a paddle drier is employed upon preparation.

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B17  
12. The process for preparing a modified polyphenylene ether resin according to claim 7, wherein a Henschel mixer is employed upon preparation.

13. The process for preparing a modified polyphenylene ether resin according to claim 7, wherein a hopper is employed upon preparation.

14. The process for preparing a modified polyphenylene ether resin according to claim 7, wherein the modifier (B) is maleic anhydride, maleic acid, fumaric acid, phenyl maleimide, itaconic acid, malic acid, glycidyl acrylate or glycidyl methacrylate.

SUB  
R1

15. The process for preparing a modified polyphenylene ether resin according to claim 7, wherein 0.2 to 3.0 parts by weight of the modifier (B) is reacted with 100 parts by weight of the polyphenylene ether (A).